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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,413	08/01/2001	Michael James Underhill	211178	4221

23460 7590 07/03/2002

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EXAMINER

NGUYEN, MINH T

ART UNIT PAPER NUMBER

2816

DATE MAILED: 07/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/831,413

Applicant(s)

UNDERHILL, MICHAEL JAMES

Examiner

Minh Nguyen

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27,29 and 30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27,29 and 30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to because: (i) in Fig. 8(a), the capacitor connected to the transformer XMR is mislabeled, i.e., "C3" should be changed to --C2--; (ii) the text descriptions on sheets 1, 2, 4, 5 and 6 of the drawings should be deleted.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: (a) the specification does not have proper antecedent basis for the "inverted gate means" recited on lines 2 of claims 19 and 23, i.e., it is unclear which elements and structure shown in the drawings corresponding to the recited means; (b) the specification does not have proper antecedent basis for the "means providing a low impedance path between

Art Unit: 2816

the input and the output of the negative feedback path” recited in claim 25, i.e., it is unclear which elements and structure shown in the drawings corresponding to the recited means.

4. The disclosure is objected to because of the following informalities:

In page 3, line 16, “Figures 8 and 9” should be changed to --Figures 8(a) and 9(a)-- since there is no Fig. 8 or 9 in the drawings.

In page 4, line 14, “(R1,C4) should be changed to -- (R2, C4) --.

In page 9, line 18, “transistor T2” is not seen in Fig. 9.

Appropriate correction is required.

5. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

6. Claims 12, 27 and 30 are objected to because of the following informalities:

In claim 12, line 2, “a discharge part of the time-varying voltage” should be changed to --the voltage level of the time-varying voltage--,

line 3, “mean d.c. level” should be changed to --mean d.c. voltage level--.

In claim 27, line 1, “the or each” should be deleted. It is further noted that this claim should be amended to be dependent on a single claim only since the paying fee in the record indicate that it is a single dependency instead of multiple dependency.

In claim 30, "combianation" should be changed to --combination--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-27 and 29-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, the clause "integrator charge storage means" recited on line 2 should be followed by a specified function to complete a means plus function statement as required by 35 U.S.C. 112, sixth paragraph. Since the "mean d.c. voltage level" recited on lines 9-10 is generated by a lowpass filter (Fig. 6, resistor R2 and capacitor C4), the lowpass filter is considered an essential element, and therefore, it must be included in the claim. See MPEP § 2172.01.

As per claim 2, the recitation "means defining a negative feedback path between the control input and an output of the integrator charge storage" on lines 2-3 is misdescriptive because as shown in Fig. 6, there is no feedback path between the output of the capacitor C3 and the gate of transistor T1 as recited.

As per claim 13, the recitation that the circuit of claim 1 including frequency doubling means on lines 1-2 is misdescriptive because the frequency doubling means and the charging means are not both existed in the same circuit. The claim is further rejected as being indefinite

because the recitation “including frequency doubling means comprising a first said charging means and a second said charging means” on lines 2-3 appears to substituting or eliminating elements recited in claim 1, i.e., the charging means recited in claim 1 is substituted by the frequency doubling means.

As per claim 19, the recitation on lines 2-3 that the means for comparing comprises inverted gate means having an input coupled to the integrator charge storage means and an output is unclear and confusing for the reason noted in item 3 above.

As per claim 20, the same problem exists for the recited inverted gate means as discussed in claim 19 above.

As per claim 23, the recitation on lines 2-3 that the means for comparing comprises inverted gate means having an input coupled to the integrator charge storage means and an output is unclear for the reason noted in item 3 above.

As per claim 24, the same problem exists for the recited inverted gate means as discussed in claim 23 above.

As per claim 25, the recitation “means providing a low impedance path between the input and the output of the negative feedback path” is unclear and confusing for the reason noted in item 3 above. It is also unclear which nodes in the circuit are seen as the input and output of the negative feedback path.

As per claims 2-27 and 29-30, these claims are further rejected because of the indefiniteness of claim 1.

Allowable Subject Matter

8. Claims 1-27 and 29-30 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claim 1 is allowable because the prior art of record fails to disclose or suggest an anti jitter circuit which includes a discharging means for continuously discharging the integrator charge storage means and a means for comparing the time varying voltage waveform with the means d.c. voltage level wherein the discharging means having the structures shown in Figs. 3(a), 6 and 9(a) and the means for comparing having the structure shown in Fig. 6.

Claims 2-27 and 29-30 are allowable for the reason noted in claim 1.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 4,071,781 to Kayalioglu listed in the IDS discloses an anti jitter circuit (Fig. 1) which includes an integrator charge storage capacitor B, charging devices 15, 17-20, averaging device 30, and comparing device 10.

US Patent No. 3,800,167 to Smith discloses a circuit having an anti jitter circuit (Fig. 1) which includes a storage device 20, charging device (D1, D2, 11, 19, 17), averaging device (27, 29, 26) and comparing device 21.

US Patent No. 4,226,219 to Olmstead discloses a circuit having an anti jitter circuit (Fig. 1) which includes a storage device 18, charging device (10, 14, 16, 20), discharging device 44, averaging device (32, 34, 36, 38) and comparing device 28.

US Patent No. 3,883,756 to Dragon discloses a circuit having an anti-jitter circuit (Fig. 3) which includes a charge storage device 20, charging device Q3, discharging device Q4 and comparing device 21.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is 703-306-9179. The examiner can normally be reached on Monday - Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 703-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Minh Nguyen
Examiner
Art Unit 2816

June 28, 2002